



| MODEL  | rpm / Hz  | VOLTAGE   | PRIME <sup>(1)</sup> | STANDBY <sup>(2)</sup> |
|--------|-----------|-----------|----------------------|------------------------|
| PI220P | 1500 / 50 | 400 / 230 | 200.0 kVA / 160kWe   | 220 kVA / 176kWe       |

Full rated power available upto 100 meter elevation at ambient of 27degC, for other temperature and altitude limits please consult application team.

### ENGINE SPECIFICATIONS

|                                   |                                |
|-----------------------------------|--------------------------------|
| Rated Output (PRP) <sup>(1)</sup> | 186.3 kW <sub>m</sub>          |
| Rated Output (ESP) <sup>(2)</sup> | 204.9 kW <sub>m</sub>          |
| Engine Make & Model               | Perkins 1206A-E70TTAG1         |
| No. of Cylinders                  | 6 Vertical In-line             |
| Cycle                             | 4 Strokes                      |
| Aspiration                        | Turbocharged aftercooled       |
| Cooling Method                    | Water                          |
| Governing Type                    | Electronic                     |
| Governing Class                   | G2 - ISO 8528 Part 5           |
| Compression Ratio                 | 15.8:1                         |
| Displacement                      | 7.01 L (427.7in <sup>3</sup> ) |
| BorexStroke (mm/in)               | 105 x 135 /<br>4.13 x 5.3      |
| Battery and Charger Alternator    | 12 V VDC , 100 Amp             |

### AIR SYSTEM

|                           |                          |
|---------------------------|--------------------------|
| Air Filter Type           | Dry Element              |
| Combustion Air Flow (PRP) | 10.8 m <sup>3</sup> /min |
| Combustion Air Flow (ESP) | 11.6 m <sup>3</sup> /min |
| Radiator Air Flow         | 240 m <sup>3</sup> /min  |

### COOLING SYSTEM

|                              |                        |
|------------------------------|------------------------|
| Total Coolant Capacity (L)   | 32.3 L (8.53 US gal)   |
| Water Pump Type              | Centrifugal Eng-Driven |
| Radiator Fan Load            | 9.4 kW                 |
| Heat Radiation to Room (PRP) | 22.8 kW                |
| Heat Radiation to Room (ESP) | 25.3 kW                |

### LUBRICATION SYSTEM

|                    |                          |
|--------------------|--------------------------|
| Oil Filter Type    | Spin on full flow filter |
| Total Oil Capacity | 13-16 L (3.4-4.2 US gal) |
| Oil Pan            | 16 L (9.5 US gal)        |
| Oil Type           | API CH4/C14; SAE 15W-40  |

### FUEL SYSTEM

|   |                           |
|---|---------------------------|
| Fuel Filter: Spin on primary,secondary and water filter separator |                           |
| Recommended Fuel  | Class A2 Diesel           |
| Fuel Consumption Standby  | 61.1 L/hr (16.1 US gas/h) |
| Fuel Consumption 100% PRP   | 54.5 L/hr(14.4 US gas/h)  |
| Fuel Consumption 75% PRP  | 40.4 L/hr (10.7US gas/h)  |
| Fuel Consumption 50% PRP  | 27.8 L/hr(7.34 US gas/h)  |

### EXHAUST SYSTEM

|                                  |                                       |
|----------------------------------|---------------------------------------|
| Muffler Type                     | Residential Grade                     |
| Max. Pressure                    | 16.5 kPa                              |
| Exhaust Gas Flow (PRP/ESP)       | 24.5 / 26.9 m <sup>3</sup> /min       |
| Exhaust Gas Temperature(PRP/ESP) | 445 <sup>0</sup> C/482 <sup>0</sup> C |

### ALTERNATOR SPECIFICATIONS

|                                       |                          |
|---------------------------------------|--------------------------|
| Rated Output (Prime) <sup>(1)</sup>   | 200 kVA                  |
| Rated Output (Standby) <sup>(2)</sup> | 220 kVA                  |
| Alternator Make & Model               | Leroy somer<br>TAL 044 M |
| Number of Poles                       | 4                        |
| Number of Winding Leads               | 6/12                     |
| Type of Bearing                       | Single                   |
| Insulation Class / Temp Rise          | H/H                      |
| Efficiency @ Rated Voltage            | 92.6%                    |
| Ingress Protection Rating             | IP 23                    |
| Excitation System                     | shunt                    |
| AVR Model                             | R120                     |

### ALTERNATOR OPERATING DATA

|                     |                                     |
|---------------------|-------------------------------------|
| Overspeed           | 2250 r.p.m                          |
| Voltage Regulation  | ± 1 %                               |
| Waveform distortion | No load < 2.5%,<br>Linear load < 5% |
| Radio Interface     | EN 61000-6-2 & EN 61000-6-4         |
| Cooling Air Flow    | 0.29 m <sup>3</sup> /sec            |

<sup>(1)</sup> **PRIME POWER RATING (PRP):** PRP is defined as the maximum power which a Generating set is capable of delivering continuously whilst supplying a variable electrical load when operated for an unlimited number of hours per year. The permissible average power output over 24 hours shall not exceed 70% of PRP unless otherwise agreed by RIC engine manufacturer. An overload capability of 10% of 100% of the prime rated electrical power is permitted for emergency use for a period of 1 hour within 12 hours of operation

<sup>(2)</sup> **EMERGENCY STANDBY POWER RATING (ESP):** ESP is defined as the maximum power available during a variable electrical power sequence, under the stated operation condition, for which a generating set is capable of delivering power in the event of a utility power outage or under test condition for up to 200 Hours of operation per year. The permissible average output over 24 hour of operation shall not exceed 70 % of the ESP power rating noting that no over load is permitted.



### CONTROLLER SPECIFICATIONS

|                           |                                      |
|---------------------------|--------------------------------------|
| Controller Make & Model   | DeepSea 6120                         |
| Operation Mode            | MRS / AMF (optional)                 |
| Display                   | Graphic Back-lit LCD (128x64) pixels |
| Ingress Protection Rating | IP65                                 |
| Binary Inputs/Outputs     | 8 / 6                                |
| Analog Inputs             | 4                                    |
| Measurement               | Vac, A, Hz, kVA, kW, Vdc             |
| Event Log                 | Alarms log, Hrs log                  |
| Communication             | USB                                  |

### ENCLOSURE SPECIFICATIONS

|  |                                |
|--|--------------------------------|
| Enclosure Type                           | Acoustic & Weather Proof       |
| Anticorrosive Protection                 |                                |
| Polyester Powder Coated Galvanized Sheet |                                |
| Ingress Protection Rating                | IP22                           |
| Lifting                                  | ISO Standard Lifting           |
| Emergency                                | External Emergency Push Button |
| Canopy RAL Color                         | RAL 9010                       |
| Baseframe RAL Color                      | RAL 9010                       |
| Noise Pressure level @ 7m                | 84 dB(A)                       |

### GENSET DIMENSIONS & WEIGHT

| GENSET TYPE | Length (mm) | Width (mm) | Height (mm) | Fuel Tank Capacity (L) | Dry Weight (kg) Appx | Wet Weight (kg) Appx |
|-------------|-------------|------------|-------------|------------------------|----------------------|----------------------|
| OPEN        | 2800        | 1120       | 1660        | 525                    | 2289                 | 2335                 |
| CLOSE       | 4414        | 1614       | 2217        | 843                    | 2200                 | 2250                 |

Note: The following dimensions are for preliminary guidance. For more detailed and accurate dimensions, please refer to the General Arrangement Drawing (GAD).

### STANDARD MECHANICAL FEATURES

Genset design provides a low noise level with an optimized performance of the ventilation and exhaust systems at 50 °C ambient temperature.

Robust structure design of Enclosure and Baseframe.

Heavy duty lifting lugs.

Multi doors for easy access & maintenance.

Ingress Protection Rating according to BS EN 60529.

Heavy Duty Baseframe with built-in tank & forklift pockets.

Residential Grade Muffler with rain cap.

### STANDARD ELECTRICAL FEATURES

An advance Control system is designed to provide a comprehensive protection and to monitor the parameters of generating set.

MCCB power circuit breaker.

Battery with charging alternator, cables, and tray.

Sealed harness & high resistant electrical connections.

Fast and accurate protection response.

Generating Set remote start function.

Numeric display with LED. Various languages capable.

### OPTIONAL FEATURES

Advanced Controllers are available on request.

4 poles manual / Motorized Circuit breaker

Jacket water pre-heater

Static Battery Charger

Critical grade muffler

Fuel Filter / Water separator Fuel Filter

Remote Annunciator

### Application

Infrastructure, Industrial, Residential, Telecom, Defense, Mining, Agriculture

